RHIC Physics fy05 Run
Daily Quench Analysis for the month of May 2005

Monday-May 02, 2005: SQ-007; Rotator Quench Permit 5c-ps3, File: BAS.1115025310

Magnet Fail = **05:15:08 +2308991** (1st), Link Status / Permit = **05:15:08 +2309031** (2nd)

Operating Currents Qdplots / Snapshot Trip Time:
Rotator Magnet: **bi5-rot3-2.3-ps**
Snapshot Time: 05:15:10.187 (168.49 amps), Last Command indicated ON
Ground Current: bi5-rot3-2.3 = 0.004289 amps / 30Hz Sample Rate
QPAControl / Timing Resolver: No faults indicated, Quench Detector bit 8 first to initiate.
Qdplots: Blue Aux 5, signal: BI5ROT3_2IC-2OC, Int. 1
Beam Loss Monitors (Rads/Hr): BLM: Beam Aborted at 05:15:10 indicates proper dumps occurred in sectors 9 and 10. Sector 5 BLM's are indicating zero beam losses at the rotators.
Magnet quench: Real

Rotator Magnet: **bi5-rot3-1.4-ps**
Snapshot Time: 05:15:13.312 (218.56 amps), Last Command indicated ON
Ground Current: bi5-rot3-1.4 = 0.004349 amps / 30Hz Sample Rate
QPAControl / Timing Resolver: No faults indicated, Quench Detector bit 7first to initiate.
Qdplots: Blue Aux 4, signal: BI5ROT3_1IC-4IC, Int. 1
Magnet quench: Real (Due to Perturbation from the bi5-rot3-2.3 Magnet)

Technical Notes / Sequence of Events: In reference to the MCR comment below, several supplies do indicate a slight change in Voltage / Current. I believe this is due to the warm flow of gas being dissipated through the path of the Cryogenic Flow. It would appear that Beam was not an issue with the bi5-rot3-2.3 magnet quenching at operating current. The Cryo Log indicated an earlier problem with 2 mass flow controllers (H5452E @ spin BI5HRD & H6388E @ spin YO5HRD) [D203] intermittently flowing above & below set point deviation allowance. Beginning to happen frequently, the flow rate seemed to return to within deviation limit prior to 3-minute window for alarm. [D259]. A possible power supply problem with bi5-rot3-2.3 needs further investigation during the next maintenance day. However for now, quench detector 5c-qd1 tripped due to a real magnet quench at bi5-rot3-2.3. At approximately 2.98 seconds later, bi5-rot3-1.4 magnet quenched due to a flow of warm gas created by the bi5-rot3-2.3 magnet. *G. Heppner*

Physics / MCR Logs: 06:34 several power supplies show single wave of ripple before the first QLI. –JLN
The following power supplies: bi5-qd2-ps, bo6-qf8-ps and bi5-qf9-ps show Error Swings?)

Cryogenics Log May1, 2005:
23:24 ALARM- Lead flow control does not match set point. H4635E @ snake Y9HRD. Manually adjusted flow & cleared. Also, 2 mass flow controllers (H5452E @ spin BI5HRD & H6388E @ spin YO5HRD) [D203] are intermittently flowing above & below set point deviation allowance. This is starting to happen frequently, but flow rate is returning to within deviation limit prior to 3-minute window for alarm. [D259]. -cs

May-02-2005, 00:00 ALARM- Lead flow control does not match set point. H4635E @ snake YO9HRD. Manually adjusted flow. Reset. -cs
05:24 Blue QLI. TI5216 sextant 4/5 @ 5.93 K. Cryo Permissive Interlock open. 5Q6 recooler empty. Notified MCR OC will inform when ready. -cs
05:36 5Q6 recooler refilled. Reset interlock. Informed MCR OC Cryo ready for recovery sequence. –cs

Rotator QLI Recovery TAPE Start: **06:08:23** Estimated Down Time: **56** minutes
Link Recovered Time for bi5-rot3-1.4: **06:09:07** Link Recovered Time for bi5-rot3-2.3: **06:10:29**

Quench Analysis: Undetermined
(Counter =Other)

RHIC Physics fy05 Run
Daily Quench Analysis for the month of May 2005

Monday-May 02, 2005: PR-122, Blue Quench: File# = 1115025315

Permit ID: **6b-ps1** Timestamp: **05:15:12 +3333447** Beam Permit Fail Timestamp: **05:15:08 +2308995**
QPAControl / Timing Resolver: No faults initiated, Blue Quench Detector pulled the link.
Quench Detector(s) Trip: 6b-qd1, B5QFQ6_4VT, Int. 20, Tq –24
DX Heaters: All charged and running.
AC Line Monitors: All appear to be normal working voltages
5 Minute: Quench Delay File: No indications, All Systems running.
Beam Loss Monitors (Rads/Hr): Beam Aborted at 05:15:10 indicates proper dumps occurred in sectors 9 and 10.
Sector 5 BLM's are indicating zero beam losses at the rotators.
Main Magnet Power Status: No unusual alarms.
Running at Store Energy for pp BDMC = 1946.37 amps, BQMC = 1873.44 amps

Technical Notes / Sequence of Events: The 6b-qd1 quench detector tripped the Blue Link due to a real Buss quench at B5QFQ6_4VT due to Perturbation from the bi5-rot3-2.3 and bi5-rot3-1.4 magnets that first quenched 5.024 seconds earlier (SQ-007). Cryogenic flow is counterclockwise which would allow the heat wave generated by the Rotator Quench to go from Sector 5 to Sector 4 putting these magnets in harms way. *G Heppner*

Physics / MCR Logs: 06:34 several power supplies show single wave of ripple before the first QLI. –JLN
The following power supplies: bi5-qd2-ps, bo6-qf8-ps and bi5-qf9-ps show Error Swings?)

Cryogenics Log May1, 2005:
23:24 ALARM- Lead flow control does not match set point. H4635E @ snake Y9HRD. Manually adjusted flow & cleared. Also, 2 mass flow controllers (H5452E @ spin BI5HRD & H6388E @ spin YO5HRD) [D203] are intermittently flowing above & below set point deviation allowance. This is starting to happen frequently, but flow rate is returning to within deviation limit prior to 3-minute window for alarm. [D259]. -cs

May-02-2005, 00:00 ALARM- Lead flow control does not match set point. H4635E @ snake YO9HRD. Manually adjusted flow. Reset. -cs
05:24 Blue QLI. TI5216 sextant 4/5 @ 5.93 K. Cryo Permissive Interlock open. 5Q6 recooler empty. Notified MCR OC will inform when ready. -cs
05:36 5Q6 recooler refilled. Reset interlock. Informed MCR OC Cryo ready for recovery sequence. –cs

QLI Recovery TAPE Start: **05:37:51** Link Recovered Time: **05:58:16** User Invoked Cancel
Estimated Down Time: **See Next Quench PR-123**

Quench Analysis: Cryo Induced Heat Wave Buss Quench due to Magnet bi5-rot3-2.3 quenching.
(Counter = - Other)

Monday-May 02, 2005: **PR-123, Blue Quench: File# = 1115027221**
Permit ID: **6b-ps1** Timestamp: **05:47:00 +1241650** Beam Permit Fail Timestamp: **05:15:08 +2308995**
QPAControl / Timing Resolver: No faults indicated, QP03-R6BBQF2-bi5-qd2-qp pulled the link.
Quench Detector(s) Trip: No indications, all Systems running.
DX Heaters: All charged and running.
AC Line Monitors: All appear to be normal working voltages
5 Minute: Quench Delay File: No indications, All Systems running.
Beam Loss Monitors (Rads/Hr): No beam in the machine.
Main Magnet Power Status: At Park Current

Technical Notes / Sequence of Events: While recovering from PR-122, the postmortems show nothing obvious. Bi5-qd2-qp had pulled the link but there were no faults indicated. A possible Power Supply to QPA connection may be the fault. A second attempt to recover the Blue link was successful. *G Heppner*

Physics / MCR Logs: MCR: 06:01, the quench recovery failed to completed successfully. After completing the recovery sequence, we receive another quench link indication.

Cryogenics Log May2, 2005: Cryo had already given the Okay to Recover.

QLI Recovery TAPE Start: **05:58:21** Link Recovered Time: **06:06:35** Estimated Down Time: **52** Minutes from PR-122
Quench Analysis: Possible cable problem between bi50qd2 and QPA
(Counter = IR Supplies)

RHIC Physics fy05 Run
Daily Quench Analysis for the month of May 2005

Tuesday-May 03, 2005: PR-124, Blue Quench: File# = 1115132005
Permit ID: **7b-ps1 in the Pink**
Permit ID: **4b-time.A** Timestamp: **10:53:24 +1053980** Beam Permit Fail Timestamp: **10:45:52 +458111**
QPAControl / Timing Resolver: N/A
Quench Detector(s) Trip: 4b-qd1, B3QDQ8_VT, Int. 20, Tq –23
DX Heaters: All charged and running.
5 Minute: Quench Delay File: No indications, All Systems running
Beam Loss Monitors (Rads/Hr): N/A
Main Magnet Power Status: At Injection Current, BDMC = 473.16 amps, BQMC = 453.57 amps

Tuesday-May 03, 2005: PR-124, Yellow Quench: File# = 1115132005
Permit ID: **7b-ps1 in the Pink**
Permit ID: **10a-ps3.A** Timestamp: **11:28:52 +1253224** Beam Permit Fail Timestamp: **10:45:52 +458111**
QPAControl / Timing Resolver: N/A
Quench Detector(s) Trip: 10a-qd2, Y9QDQ8_VT, Int.20, Tq –24
5 Minute: Quench Delay File: No indications, All Systems running
Beam Loss Monitors (Rads/Hr): N/A
Main Magnet Power Status: At Injection Current, YDMC = 473.17 amps, YQMC = 454.40 amps

Technical Notes / Sequence of Events: The Facility experienced a Controls Failure at 7b-ps1. Attempts to recover caused both links to go down. Refer to the Physics/MCR Log comments that follow. *G Heppner*

Physics / MCR Logs:
10:10 Acnlini84 (cfsb operations disk) & Acnlin83 (cfsf data run disk) crashed. R. Katz & C. Whalen is investigating.
10:45 Cryo reports that both rings quench link interlocked.
11:38 Communications with acnlin84 & acnlin83 are starting to come back.
11:44, Just starting to get communications back. Cryo said the QLI happened around 1045. Approx 30 min after the acnlin84 (operations) disk failure. -BvK [other] [controls]
13:00 Controls systems are back online. C. Whalen reports that the Operations File System computers (acnlin82, acnlin83, & acnlin84) and process server acnlin91 crashed. C. Whalen and R. Katz halted the disc scan operation after it was apparent that the scans would take several hours. Running the quench recovery for both RHIC rings.
13:25 W. Louie is looking into a problem with the Yellow quench recovery. It is hanging up on the step that verifies trCtrlM.6b-ps2.A2.
14:58 PS Snapshot Server seems to have been causing the problems with the quench recovery. A Marusic stopped the task. The quench recovery has completed.
15:05 Snake quench recovery underway.

Cryogenics Log May3, 2005:
11:46 MCR lost server at 10:10. RHIC ring quenched at 10:47. System now still recovering, filling pot and temps coming down. -yatauro
12:14 System is back to normal, called MCR to have them reset the Cryo server but they are still having problems. They will get back to me when they are ready. -yatauro
13:40, Set all lead flows back into auto. -yatauro

Blue QLI Recovery TAPE Start: **12:53:41** Link Recovered Time: **13:01:18** Estimated Down Time: **138** Minutes
Yellow QLI Recovery TAPE Start: **13:02:10 and failed at step (trCtrlM.6b-ps2.A2)**
Yellow QLI Recovery TAPE Start: **13:31:41 and failed at step (trCtrlM.2b-ps2.A1)**

Quench Analysis: Controls Failure
(Counter = Controls Related)

Tuesday-May 03, 2005: SQ-008; Snake Quench Permit 3c-ps1, File: BAS.1115131552

Magnet Fail = **Magnet Channel: disabled** Link Status / Permit = **10:45:52 +458148**

Operating Currents Qdplots / Snapshot Trip Time:
Snake Magnet Gas Cooled Lead: **YI3SNK7R2_GL**
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Yellow Aux 3, Signal: YI3SNK7R2_GL, Int.1 at 10:45:52

Snake Magnet: **yi3-snk7-2.3-ps** (at operating current of 323.06 amps)
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Yellow Aux 6, Signal: YI3SNK7_1IC-1OC, Int.1 at 10:45:52
Magnet Quench Status: Real

Snake Magnet: **yi3-snk7-1.4-ps** (at operating current of 97.88 amps)
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Yellow Aux 7, Signal: YI3SNK7_2OC-3OC, Int.1 at 10:45:52
Magnet Quench Status: Real

Technical Notes / Sequence of Events:
The following occurred after several of the Operations File System computers had crashed at 10:10:33 as per the Alarm Log Page. Gas Cooled Lead YI3SNK7R2_GL quenched first, causing the yi3-snk7-2.3 magnet to quench at operating current. Magnet yi3-snk7-1.4 according to the time line unless the data is insufficient due to the Controls System going down, appears to have quenched at the same time. *G. Heppner*

Physics / MCR Logs: 10:10 Acnlini84 (cfsb operations disk) & Acnlin83 (cfsf data run disk) crashed. R. Katz and C. Whalen are investigating.
10:45 Cryo reports that both rings quench link interlocked.
11:38 Communications with acnlin84 & acnlin83 are starting to come back.
13:00 Controls systems are back online. C. Whalen reports that the Operations File System computers (acnlin82, acnlin83, & acnlin84) and process server acnlin91 crashed. C. Whalen and R. Katz halted the disc scan operation after it was apparent that the scans would take several hours. Running the quench recovery for both RHIC rings.

Cryogenics Log May 3, 2005:
11:46 MCR lost server at 10:10. RHIC ring quenched at 10:47. Systems are now still recovering, filling pot and temps coming down. -yatauro
12:14 System are now back to normal, called MCR to have them reset the Cryo server but they are still having problems. They will get back to me when they are ready. -yatauro

Rotator QLI Recovery TAPE Start: **15:07:01** Estimated Down Time: **387** minutes
Link Recovered Time for Yi3-snk7-1.4 **15:10:12** Link Recovered Time for Yi3-snk7-2.3: **15:11:34**

Quench Analysis: Operations File Systems Computers Crashed
(Counter =Controls Failure)

Tuesday-May 03, 2005: SQ-008; Snake Quench Permit 3c-ps1, File: BAS.1115131552

Magnet Fail = **Magnet Channel: disabled** Link Status / Permit = **10:45:52 +458148**

Operating Currents Qdplots / Snapshot Trip Time:
Snake Magnet Gas Cooled Lead: **BO3SNK7R3_GL**
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Blue Aux 1, Signal: BO3SNK7R3_GL, Int.1 at 10:53:24

Snake Magnet: **bo3-snk7-2.3-ps** (at operating current of 323.27 amps)
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Blue Aux 5, Signal: BO3SNK7_2IC-2OC, Int.1 at 10:53:24
Magnet Quench Status: Real

Snake Magnet: **bo3-snk7-1.4-ps** (at operating current of 100.09 amps)
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Blue Aux 4, Signal: BO3SNK7_1IC-4IC, Int.1 at 10:53:26
Magnet Quench Status: Real (Perturbation occurs 2.779 seconds later)

Technical Notes / Sequence of Events:
The following occurred after several of the Operations File System computers had crashed at 10:10:33 as per the Alarm Log Page. Gas Cooled Lead BO3SNK7R3_GL quenched, causing the bo3-snk7-2.3 magnet to quench at operating current. Magnet bo3-snk7-1.4 then proceeded to quench 2.779 seconds after the bo3-snk7-2.3 magnet quenched due to the flow of warm gas. The time stamps for this event where taken from the Qdplots since all other data was not available due to the related Controls problem (systems down). *G. Heppner*

Physics / MCR Logs: 10:10 Acnlini84 (cfsb operations disk) & Acnlin83 (cfsf data run disk) crashed. R. Katz and C. Whalen are investigating.
10:45 Cryo reports that both rings quench link interlocked.
11:38 Communications with acnlin84 & acnlin83 are starting to come back.
13:00 Controls systems are back online. C. Whalen reports that the Operations File System computers (acnlin82, acnlin83, & acnlin84) and process server acnlin91 crashed. C. Whalen and R. Katz halted the disc scan operation after it was apparent that the scans would take several hours. Running the quench recovery for both RHIC rings.

Cryogenics Log May 3, 2005:
11:46 MCR lost server at 10:10. RHIC ring quenched at 10:47. Systems are now still recovering, filling pot and temps coming down. -yatauro
12:14 System are now back to normal, called MCR to have them reset the Cryo server but they are still having problems. They will get back to me when they are ready. -yatauro

Rotator QLI Recovery TAPE Start: **15:07:01** Estimated Down Time: **384** minutes
Link Recovered Time for Bo3-snk7-1.4 **15:07:37** Link Recovered Time for Bo3-snk7-2.3: **15:08:55**

Quench Analysis: Operations File Systems Computers Crashed
(Counter =Controls Failure)

Tuesday-May 03, 2005: SQ-008; Snake Quench Permit 9c-ps1, File: BAS.1115131552

Magnet Fail = **Magnet Channel: disabled** Link Status / Permit = **10:45:52 +458148**

Operating Currents Qdplots / Snapshot Trip Time:
Snake Magnet Gas Cooled Lead: **YO9SNK7R3_GL**
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Yellow Aux 3, Signal: YO9SNK7R3_GL, Int.1 at 11:28:51

Snake Magnet: **yo9-snk7-2.3-ps** (at operating current of 324.39 amps)
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Yellow Aux 6, Signal: YO9SNK7_3IC-3OC, Int.1 at 11:28:51
Magnet Quench Status: Real

Snake Magnet: **yo9-snk7-1.4-ps** (at operating current of 97.87 amps)
PM Viewer Data: All data not available for this QLI Event.
Qdplots: Yellow Aux 7, Signal: YO9SNK7_4IC-4OC, Int.1 at 11:28:53
Magnet Quench Status: Real (Perturbation occurs 2.115 seconds later)

Technical Notes / Sequence of Events:
The following occurred after several of the Operations File System computers had crashed at 10:10:33 as per the Alarm Log Page. Gas Cooled Lead YO9SNK7R3_GL quenched, causing the yo9-snk7-2.3 magnet to quench at operating current. Magnet yo9-snk7-1.4 then proceeded to quench 2.115 seconds after yo9-snk7-2.3 had quenched due to the flow of warm gas. The time stamps for this event where taken from the Qdplots since all other data was not available due to the related Controls problem (systems down). *G. Heppner*

Physics / MCR Logs: 10:10 Acnlini84 (cfsb operations disk) & Acnlin83 (cfsf data run disk) crashed. R. Katz and C. Whalen are investigating.
10:45 Cryo reports that both rings quench link interlocked.
11:38 Communications with acnlin84 & acnlin83 are starting to come back.
13:00 Controls systems are back online. C. Whalen reports that the Operations File System computers (acnlin82, acnlin83, & acnlin84) and process server acnlin91 crashed. C. Whalen and R. Katz halted the disc scan operation after it was apparent that the scans would take several hours. Running the quench recovery for both RHIC rings.

Cryogenics Log May 3, 2005:
11:46 MCR lost server at 10:10. RHIC ring quenched at 10:47. Systems are now still recovering, filling pot and temps coming down. -yatauro
12:14 System are now back to normal, called MCR to have them reset the Cryo server but they are still having problems. They will get back to me when they are ready. -yatauro

Rotator QLI Recovery TAPE Start: **15:07:01** Estimated Down Time: **390** minutes
Link Recovered Time for Yo9-snk7-1.4 **15:14:11** Link Recovered Time for Yo9-snk7-2.3: **15:12:51**

Quench Analysis: Operations File Systems Computers Crashed
(Counter =Controls Failure)

RHIC Physics fy05 Run
Daily Quench Analysis for the month of May 2005

Tuesday-May 03, 2005: **PR-125, Yellow Quench: File# = 1115143278**
Permit ID: **6b-ps1** Timestamp: **14:01:16 +2877640** Beam Permit Fail Timestamp: **10:45:52 +458111**
QPAControl / Timing Resolver: N/A
Quench Detector(s) Trip: 10a-qd2, Y9QDQ8_VT, Int.20, Tq –24
5 Minute: Quench Delay File: No indications, All Systems running
Beam Loss Monitors (Rads/Hr): N/A
Main Magnet Power Status: At Injection Current, YDMC = 473.17 amps, YQMC = 454.40 amps

Technical Notes / Sequence of Events: Recovering from the previous Control Failure, there was a problem with recovering the Yellow Link. Talking with Wing Louie on the phone, we could see that QPAIC-A1.R6BQD2 Timing Resolver indicated that some program kept cycling a reset command like a loop command was being sent. Turns out that this was still related to a Control Fault (PS Snapshot Server). *G Heppner*

Physics / MCR Logs:
14:58 PS Snapshot Server seems to have been causing the problems with the quench recovery. A Marusic stopped the task. The quench recovery has completed.

QLI Recovery TAPE Start: **14:49:40** Link Recovered Time: **14:56:59** Estimated Down Time: **208** Minutes
Quench Analysis: Controls Failure
(Counter = Controls Related)

Scheduled Maintenance Day 0800 to 1630
***Wednesday-May 04, 2005: PR-126,* Blue and Yellow Quench Files:**

File# = 1115212646 Permit ID: **Blue 4b-time.A** Timestamp: **09:17:24 +2090535**
File# = 1115228754 Permit ID: **Yellow: 8b-ps1** Timestamp: **13:45:52 +2565389**

Technical Notes / Sequence of Events: Once all the equipment was back up and running, performed Two Hysteresis Loops to check power supplies. All good and well, turned the RHIC Machine back over to MCR. QLI Counters are now activated as of 17:20:00 Hours. *G. Heppner*

RHIC ps Maintenance performed today: 1) Removed extension cord for UD1-UD2 psi in the ATR line and plugged the psi into the outlet in the UD1-UD2 p.s. 2) Hi-potted RHIC snake magnets in alcoves 3c and 5c. 3) Checked ac connections on RHIC snake p.s.'s in alcoves 3c, 5c, 7a, and 7c. 4) Replaced the power supply for bi5-rot3-2.3-ps. 5) Quenched AGS cold snake magnet at 290A. 6) Added fans to box covering 5353mcm connections of AGS cold snake magnet. 7) AGS cold snake p.s.'s are unlocked. 8) Disconnected a scope from y12-dh0-ps digital isolation card. 9) Repaired a wire on the ZFCT connector of b2-dhx-ps backplane. 10) Replaced y8-dh0-ps firing board 11) Installed voltage monitoring boards in sector 1. -Don Bruno [rhic] [ps]

March 31 Blue Recovery TAPE Start: **14:19:01** Link Recovered Time: **14:27:49**
March 31 Yellow Recovery TAPE Start: **15:32:10** Link Recovered Time: **15:41:12**

Quench Analysis: Scheduled Maintenance
(Counter = Maintenance) Weather conditions: Partly Cloudy, Mild Conditions.

Monday-May 09, 2005: PR-127, Blue Quench: File# = 1115619050

Permit ID: **4b-time.A** Timestamp: **02:10:48 +2965911** Beam Permit Fail Timestamp: **02:10:48 +2965912**
QPAControl / Timing Resolver: QP03-R4BBQF2-bo3-qf2-qp, no faults initiated
Quench Detector Trips: All tripped indicating Positive TQ Values.
DX Heaters: All charged and running.
5 Minute: Quench Delay File: No indications, All Systems running.
Beam Loss Monitors (Rads/Hr): Sectors 9 and 10, Beam Dumps appear proper aborts had occurred.
Main Magnet Power Status: At Store Energy, BDMC = 1946.37 amps, BQMC = 1873.47 amps

Technical Notes / Sequence of Events: See Comment by Don Bruno, Physics / MCR Logs below: *G Heppner*

Physics / MCR Logs: 03:01 bo3-qf2-ps tripped to the OFF state bringing down the link. I am going to have CAS swap out the control card on the p.s. That may or may not be the problem. I already turned the p.s. back on and ran it to 1 amp to make sure it would turn back on ok. -Don Bruno [blue] [ps]
03:24 CAS swapped out the control card. I asked MCR to run quench recovery and I will watch to make sure it all comes up ok. -Don Bruno [blue] [ps]

Cryogenics Log May2, 2005: Nothing to report on this QLI.

QLI Recovery TAPE Start: **03:22:22** Link Recovered Time: **03:30:42** Estimated Down Time: **80** Minutes

Quench Analysis: bo3-qf2 had tripped to the OFF state
(Counter = IR Supplies)

Monday-May 09, 2005: PR-128, Blue Quench: File# = 1115640108

Permit ID: **4b-time.A** Timestamp: **08:01:48 +501476** Beam Permit Fail Timestamp: **08:01:48 +501477**
QPAControl / Timing Resolver: QP03-R4BBQF2-bo3-qf2-qp, no faults initiated
Quench Detector Trips: All tripped indicating Positive TQ Values.
DX Heaters: All charged and running.
5 Minute: Quench Delay File: No indications, All Systems running.
Beam Loss Monitors (Rads/Hr): Sectors 9 and 10, Beam Dumps appear proper aborts had occurred.
Main Magnet Power Status: At Store Energy, BDMC = 1946.37 amps, BQMC = 1873.47 amps

Technical Notes / Sequence of Events: Supply had tripped to the off state. As I was analyzing the live data and unaware that MCR had called Don who was on the road, Don had had this problem at 02:10:48 this morning (PR-127). Don informed MCR that we would replace the supply then called us. *Live Data as the QLI went down:* Postmortems: Indications of power supply tripping to the off state as Voltage dropped then current then Iref all before T=zero (-0.012500) PS All: Verified that the supply tripped to the off state (AC Power Remote), Alarm Log: Power Supply Link Carrier. We swapped the power supply with another one s/n 006 removed and s/n 090 put in. We then also proceeded to replace the Node Card Cable from the power supply to the Node Card Chassis (R4BBQF2, Port #3) as per Don's instructions sine this makes this swap out the third one at the same location. Total Tech Time = 75 minutes as per procedures. *G Heppner*

Physics / MCR Logs: 08:15 Don Bruno reported that the bo3-qf2 supply will be replaced by Power Supply personnel. -jak
08:10 D. Bruno reported that the Power Supply group will replace the bo3-qf2 supply.
09:23 G. Heppner reported that the bo3-qf2 supply and the node card for the supply have been replaced. Operations is recovering the quench link.
09:50The blue quench link has been recovered and beam has been injected into RHIC.

Cryogenics Log May2, 2005: 08:13 Blue QLI - Sector 4. No effect on cryogenic system. -cs

QLI Recovery TAPE Start: **09:23:46** Link Recovered Time: **09:32:55** Estimated Down Time: **91** Minutes
Tape Start: 09:23:46 (Task paused due to an Error bo10-tq6-ps ON = Standby during final checks)

Quench Analysis: bo3-qf2 had tripped to the OFF state (Replaced Entire Unit)
(Counter = IR Supplies)

RHIC Physics fy05 Run
Daily Quench Analysis for the month of May 2005

Scheduled Shutdown / Maintenance Day 0800 to 1630

***Friday-May 13, 2005*: PR-129, Blue Quench: File# = 1115987155**
Permit ID: **8b-ps1** Timestamp: **08:25:52 +3158645** Beam Permit Fail Timestamp: **9a-ps3: 06:03:16 +466166**
QPAControl / Timing Resolver: QP11-R8BD2-b8-dhx-qp, no faults initiated
Quench Detector Trips: All systems running, no faults.
DX Heaters: All charged and running.
5 Minute: Quench Delay File: No indications, All Systems running.
Beam Loss Monitors (Rads/Hr): No beam in the Machine since 06:03:16
Main Magnet Power Status: At Zero (0) Currents.

Technical Notes / Sequence of Events: A Planned Scheduled Shutdown as of Thursday, May 12, 2005 E-mail received 16:37:00. Restricted / Limited work only, the Blue Link was pulled at 1008B placing b8-dhX to Standby and then to proceed to 1004B to work on the readback problem for bo3-qd3-ps. *G Heppner*

Team inspected the "D" connector at the supply because the Lemo Connector was checked a few days ago when this happened and all was well. Next, they put a signal onto the "D" connector and read it all the way back to the Pet Page and all was well. Replaced the Buffer card for Jim to inspect with flex / heat test. Possible problem may still be in the Backplane of the 3U Control Chassis. More to follow if this is not the fix. D. Bruno

Physics / MCR Logs AGS LOTO applied, RHIC Down for Polarimeter Target Replacement
May 11, 2005, reference to bo3-qd3-ps Readbacks:18:08 An observation about bo3-qd3 diffRefWfg and diffRefCurrent alarms. The measured current matches the wfg setpoints so the power supply looks like it's just fine. The problem must be just in the reference measurement. I understand that Don Bruno already has already been notified about this. -jtm

22:15 Yes, we know about it. I have my name on the ring entry request list to fix it, although no ring entry is required. Otherwise, we will fix it on the next maintenance day. We believe it is a D connector on the back of the p.s. that has the problem with just the setpoint readback wires. We don't see this fluctuation on the front of the p.s. -Don Bruno [blue] [ps]

Cryogenics Log May2, 2005: Nothing to report on this QLI.

QLI Recovery TAPE Start: **09:41:12** Link Recovered Time: **09:49:25** Estimated Down Time: **85** Minutes
Quench Analysis: Scheduled Shutdown, RHIC Polarimeter Target Work
(Counter = Maintenance)